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Remarks

The various parts of the Office Action (and other matters, if any) are discussed below under appropriate headings.

Interview

The undersigned again wants to express his appreciation of the courtesies extended by Examiner Charles Kim during a personal interview on January 11, 2005. During the interview, the invention was discussed along with the prior art, and the pending claims. The interview included a discussion along the lines provided below.

Claim Rejections - 35 USC § 103

Claim 1, as amended, recites a method of detecting the shape of a patient body part to be treated, which includes, *inter alia*, producing a camera image of the patient body part and mapping a sufficient number of outlines of the patient body part to establish a three-dimensional shape of the patient body part. The detected three-dimensional shape of the patient body part is used together with a navigation system for location referencing in radiotherapy methods or surgical operations.

Cosman contains no teaching of the acquisition and use of three-dimensional camera data to establish the three-dimensional shape of a patient body part, let alone the claimed method of detecting and using a three-dimensional shape of a patient body part. Rather, Cosman is concerned with acquisition and use of two-dimensional "contour" data.

Because Cosman is not concerned with the acquisition of a three-dimensional contour or shape of a patient body part, there is no suggestion or motivation within Cosman that would direct the skilled artisan toward any teachings found in Nayar. Nayar fails to make a single mention of any medical application. Rather, Nayar discloses applicability to industrial vision arts.

In support of his rejection, the Examiner relies on Figure 5 and the following portion of Cosman. At col. 10, lines 59-62, Cosman states,

[t]he camera 505 is viewing the head and a representation of the head shows on the screen 552 together with ***image data indicated by the contours 553.***
(Emphasis added).

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The Examiner seems to assert that contours 553 are indicative of the detection of the three-dimensional shape of a patient body part by camera 505. However, as Cosman makes clear, contours 553 are indicative of the image data, not the camera data.

In fact, this portion of Cosman contains absolutely no teaching of the acquisition of the three-dimensional shape of a patient body part using camera 505. Rather, this portion of Cosman discloses that a two-dimensional representation of the head shows on the screen. This two-dimensional representation detected by camera 505 is registered with a graphic representation of the image data. To this effect, the Examiner's attention is directed to col. 10, lines 28-33, which state,

there is utility in even using just one camera to view the surgical field. It provides a ***two-dimensional representation*** in a projected view of the field. One may use this representation and the graphic representation from the image data to register the two views and, thus, align the graphic display in a 'camera view'.
(Emphasis added).

In further support of his rejection, the Examiner asserts that use of the term "quantitative stereotactic image data anatomy" (col. 11, lines 15-16) provides a teaching of the acquisition of a three-dimensional contour or shape of a patient body part. Col. 11, lines 10-16 of Cosman states

By so doing, one has in perspective view a registration of the camera data with the image data. Thus when one looks at the probe representation 555, on the computer graphic screen 552 of the actual probe 501, one may see immediately the correspondence of that probe relative to the quantitative stereotactic image data anatomy.

This passage contains absolutely no teaching of the acquisition and or use of a three-dimensional contour or shape data of a patient body part by camera 505. Rather, as discussed above, Cosman makes it clear that a two-dimensional representation (which is obtained by camera 505) is registered with a graphical representation of image data. In addition, Figure 6 and the accompanying text of Cosman show the overlay of two-dimensional camera data over image data.

The Examiner is invited to point out where in Cosman "quantitative stereotactic image data anatomy" is defined to mean three-dimensional contour or shape data of a

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patient body part. Without such a clear showing, the requisite motivation to combine Cosman with Nayar is lacking, and therefore the rejection is improper.

For at least these reasons, it is respectfully submitted that claim 1 and claims 2-6, 9, 11-13 and 18 dependent therefrom distinguish patentably over the references of record. Accordingly, the rejection should be withdrawn.

For at least the reasons articulated above with respect to claim 1, it is respectfully submitted that claim 19 also distinguishes patentably over the references of record, and its rejection should be withdrawn.

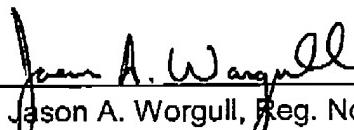
Conclusion

In view of the foregoing, request is made for timely issuance of a notice of allowance.

Respectfully submitted,

RENNER, OTTO, BOISSELLE & SKLAR, LLP

By


Jason A. Worgull, Reg. No. 48,044

1621 Euclid Avenue
Nineteenth Floor
Cleveland, Ohio 44115
(216) 621-1113

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